Bilaterally Impacted Mandibular Second and Third Molars
Mohammed Asif Ali Ansari, Mohammed Majid Ansari, Visalakshi Devarakonda

ABSTRACT
This paper reports the unusual presentation of bilateral impacted mandibular second and third molar in a 30-year-old male patient.

Keywords: Impacted molar; Bilateral Impaction; Second molar; Third molar

Introduction
Normal tooth eruption may be rarely complicated by impacted mandibular second molars. The concomitant presence of impacted lower second and third molars is even more unusual.1 The arrested eruption of the lower second and third molars can cause hindrance to normal mastication and aesthetics. Moreover, an increased risk of caries in the distal side of the first lower molar complicates the condition.1 Various treatment options have been proposed for management of such conditions namely orthodontic treatment and tooth repositioning, transplantation, and extraction of impacted second molars to avoid potential damage to the first molar root.1,2 This paper reports the unusual presentation of bilateral impacted mandibular second and third molar in a 30-year-old male patient.

Case Report
A 30-year-old male reported to the outpatient clinic with a chief complaint of pain in right posterior region of lower jaw for last one week. The medical history was normal. Intraoral examination shows a partially erupted, inclined tooth on the left side of the lower arch, distal to the first molar with deep pockets distal to the first molar. Orthopantomogram showed that the left mandibular second molar was deeply impacted horizontally, with the mesial cusps below the first molar’s root apexes. The left mandibular third molar laid above and parallel to the second molar with incomplete root formation. The panoramic radiograph also showed similar presentation on the right side with deeply impacted second molar and third molar above it (Figure 1). Surgical extraction of the four molars were planned under Local Anesthesia. was performed under local anesthesia. Local nerve-block anesthesia of the inferior dental, lingual, and buccal nerves was established with 2% Lidocaine containing 1:100,000 adrenaline. A mucoperiosteal incision was extend to the first molar to reflect a full-thickness flap. The osteotomy was performed to visualize the impacted third molar using a tungsten carbide bur mounted on a high-speed handpiece. To minimize the quantity of bone removed, the third molar was sectioned into two parts with a carbide fissure bur mounted on a high-speed handpiece and both fragments of the second molar were removed. The socket was rinsed with normal saline. Primary closure of the flap was performed using a 3/0 black silk suture. Antibiotics and nonsteroidal anti-inflammatory were prescribed postoperatively. Similar procedure was repeated on the right side after three months with uneventful healing.

Discussion
Eruption is a process of biological maturation, comprising of the axial movement of a tooth from the developmental position within the jaw towards the functional position in the occlusal plane.1,4 The eruption of the first and second permanent molars is especially important for the co-ordination of facial growth, and for providing sufficient occlusal support for undisturbed mastication.1,5 Eruption is a multifactorial process, whose biological mechanism remains unknown.3 Failure of eruption of first and second permanent molars is rare; the prevalence in the normal population is 0.01% in the case of the first permanent molar, and 0.06% in the case of the second.3

Eruption disturbances of permanent molars may become clinically and radiographically manifest as impaction, primary retention or secondary retention. This may result in clinical problems such as malocclusion and loss of neighboring teeth due to caries and periodontal disease.6 According to the classification by Andreasen and Kurol, the absence of eruption of the second molar could be caused by three events: impaction, primary retention, and secondary retention.1,7 Impaction is the cessation of the eruption of a tooth caused by a clinically or radiographically detectable physical barrier in the eruption path or due to an abnormal direction of the tooth.3 Impaction of the second molar is usually determined by a physical obstacle because of lack of space, odontomas, supernumerary teeth, odontogenic tumors, giant cell fibromatosis in the eruption line, and collision between the follicles of the second and third molars.1 However, the third molar cannot be considered as a cause of lower second molar impaction as it is not involved in either the time or in the path of the eruption of the lower second molar.1,3 The treatment options for the impacted molars includes, surgical repositioning with or without the adjacent third molar, removal of second molar allowing eruption of the third molar, transplantation of the third molar to the socket of the second molar, buccal uprighting of the second molar with orthodontic methods, orthodontic traction of the second molar with titantium miniscrew anchorage.3 In the present case comparing the feasibility and patient co-operation none of the above mentioned treatments plans
were approved and surgical extraction of the four molars were turned to be a viable option. Tooth sectioning to avoid excessive bone removal, minimum number of sutures and minimal trauma to the tissues in the surgical field was maintained. Minimum force used for the extraction to prevent pathological fracture of the mandible. The minimum manipulation of the tissue with adherence to the surgical principles during extraction gave a good prognosis with minimum post operative sequelae.

Conclusion
In conclusion, mandibular molar impaction is a very challenging and requires proper physical, clinical, and radiological examination evaluation.

Authors Affiliations
1. Mohammed Asif Ali Ansari, MDS, CCIF, FCMS, Assistant Professor, Department of Oral and Maxillofacial Surgery, HKDET Dental College, Humnabad, Gulbarga, Karnataka, India, 2. Mohammed Majid Ansari, BDS, DHA, FAGE, Consultant Dental Surgeon, Amar Facial Plastic Surgery Centre and Dental Hospital, Gulbarga, Karnataka, India, 3. Visalakshi Devarkonda, MDS, Reader, Department of Oral and Maxillofacial Surgery, Pandit Deendyal Dental College, Sholapur, Maharashtra, India.

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Address for Correspondence
Dr. Mohammed Asif Ali Ansari MDS, CCIF, FCMS, Assistant Professor, Department of Oral and Maxillofacial Surgery, HKDET Dental College, Humnabad Gulbarga, Karnataka, India, Email: drasifansari@yahoo.co.in

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